

Title (en)  
GLASS FIBERS TO REINFORCE POLYMERIC MATERIALS

Publication  
**EP 0146689 B1 19880203 (EN)**

Application  
**EP 84109667 A 19840814**

Priority  
US 55703283 A 19831201

Abstract (en)  
[origin: US4487797A] Chemically treated glass fibers can be produced having improved wet-out and resin demand performance when used for reinforced polymeric matrices which have good strength properties. The treated glass fibers have the dried residue of an aqueous treating composition having a water soluble, dispersible or emulsifiable epoxy novalac type polymer, glass fiber coupling agent, a water soluble, dispersible or emulsifiable poly(oxyalkylene-oxyethylene) polyol copolymer, wherein the ethylene oxide portion is present in an amount in the range of about 10 to about 40 weight percent of the copolymer, and the copolymer is present in an effective lubricating amount, and water in a sufficient amount to allow the aqueous treating composition to be applied to the glass fibers. The epoxy novalac type polymer can be an epoxy novalac polymer or a blend of water soluble, dispersible or emulsifiable epoxy polymer and novalac polymer or a blend of the epoxy novalac polymer and water soluble or dispersible or emulsifiable epoxy polymer or polyvinyl acetate polymer. Also, the aqueous treating composition can have a glass fiber lubricant present in an effective lubricating amount. The treated glass fibers have the dried residue of the aqueous treating composition, wherein the moisture content of the treated glass fibers is in the range of about 1 to about 10 weight percent and the amount of dried residue on the glass fibers is in the range of about 0.1 to about 2 weight percent of the treated glass fiber. The poly(oxyalkylene-oxyethylene) polyol copolymer generally has a molecular weight of greater than around 1500. The treated glass fiber strands are particularly suitable for reinforcing thermosetting polymers like vinyl ester polymeric matrices.

IPC 1-7  
**C03C 25/02**; **C08J 5/08**

IPC 8 full level  
**C08K 9/00** (2006.01); **C03C 25/10** (2006.01); **C03C 25/26** (2006.01); **C08J 5/08** (2006.01); **C08L 67/00** (2006.01)

CPC (source: EP US)  
**C03C 25/26** (2013.01 - EP US); **C08J 5/08** (2013.01 - EP US); **Y10T 428/2964** (2015.01 - EP US); **Y10T 428/31525** (2015.04 - EP US); **Y10T 442/2311** (2015.04 - EP US)

Cited by  
EP1452567A4; US7115677B2

Designated contracting state (EPC)  
BE CH DE FR GB IT LI NL

DOCDB simple family (publication)  
**US 4487797 A 19841211**; CA 1229267 A 19871117; DE 3469166 D1 19880310; EP 0146689 A1 19850703; EP 0146689 B1 19880203; JP S60122756 A 19850701; JP S6335584 B2 19880715

DOCDB simple family (application)  
**US 55703283 A 19831201**; CA 460981 A 19840814; DE 3469166 T 19840814; EP 84109667 A 19840814; JP 16988284 A 19840814